

FLAT PLATE HEAT EXCHANGER COIL AND METHOD OF OPERATING THE
SAME

ABSTRACT OF THE DISCLOSURE

A flat plat plate heat exchanger coil typically used in a bulk material heat exchanger is provided. The flat plate heat exchanger coil is designed to operate under a negative internal pressure to eliminate depressions or dimples that are typically formed into the sides of these types of heat exchanger coils during the manufacture process. With the removal of the depressions or dimples the tendency for bulk material to accumulate to the exterior surface of the coil is reduced, thereby increasing the service period of the coil. The flat plate is also provided with methods of automated cleaning of the plate coil, such as applying a low positive internal pressure in a cyclic manner to dislodge material accumulated on the coil, bumping the coil to causing a shock wave through the coil or providing means to create a shearing effect between adjacent coils to dislodge material accumulated on the exterior of the coil.